SETHU INSTITUTE OF TECHNOLOGY

(An Autonomous Institution affiliated to Anna University, Chennai)

DEPARTMENT OF AGRICULTURE ENGINEERING



CURRICULUM & SYLLABUS (I to VIII Semester)

(CHOICE BASED CREDIT SYSTEM)

REGULATIONS 2019

CHAIRPERSON

i

į

BOARD OF STUDIES AGRICULTURE ENGINEERING SETHU INSTITUTE OF TECHNOLOGY KARIAPATTI - 626 115

CHAIRMAN

ACADEMIC COUNCIL Sethu Institute of Technology Pulloor, Kariapatti - 625 115

SETHU INSTITUTE OF TECHNOLOGY

(AN AUTONOMOUS INSTITUTION) DEPARTMENT OF AGRICULTURE ENGINEERING

REGULATIONS 2019

OVERALL COURSE STRUCTURE

Code	Category	Total No of Courses	Credits	Percentage
BS	Basic Sciences	10	28.5	15
ES	Engineering sciences	9	22	14
HSS	Humanities and Social Sciences	5	9.5	8
PC	Professional Core	27	67	41
PE	Professional Electives	6	18	9
OE	Open Electives	4	12	6
PW	Project work, Seminar & Internship	5	15	8
	TOTAL	66	172	100

COURSE CERDIT – SEMESTER WISE

Branch	I	II		IV	V	VI	VII	VIII	TOTAL
AGRI	23	20.5	23	23.5	23.5	25.5	19	14	172

<mark>Employability Courses</mark> Skill Development Courses Entrepreneurship Development Courses Any two or all of the above

SEMESTER I

SL.NO	COURSE CODE	COURSE TITLE	L	т	Р	С				
THEORY	(
1.	19UEN101	English for Technical Communication	2	0	0	2				
<mark>2.</mark>	19UMA102	Engineering Mathematics – I	<mark>3</mark>	1	0	4				
<mark>3.</mark>	(19UPH103)	(Engineering Physics)	3	0	0	3				
<mark>4.</mark>	19UCY107	Chemistry for Agriculturist	<mark>3</mark>	0	0	3				
<mark>5.</mark>	(19UCS108)	Problem Solving and Python Programming	<mark>3</mark>	0	0	<mark>3</mark>				
<mark>6.</mark>	19UME109	Engineering Graphics	<mark>3</mark>	1	0	<mark>4</mark>				
PRACTI	CAL									
<mark>7.</mark>	19UGS113	Basic Sciences Laboratory	0	0	<mark>2</mark>	<mark>1</mark>				
<mark>8.</mark>	19UME111	Engineering Practices Laboratory	0	0	<mark>3</mark>	<mark>1.5</mark>				
<mark>9.</mark>	(19UCS110)	Problem Solving and Python Programming Laboratory	0	0	3	<mark>1.5</mark>				
10.	19UGM131	Induction Programme		Manc	latory					
		TOTAL	17	2	8	23				
	TOTAL NO. OF CREDITS – 23									

SEMESTER II

SL.NO	COURSE CODE	COURSE TITLE	L	т	Ρ	С						
THEORY	THEORY											
1.	19UEN201	Communication Skills for Professionals	1	0	1	1.5						
<mark>2.</mark>	(19UMA207)	Calculus, Complex Analysis and Transform Techniques	3	1	0	4						
<mark>3.</mark>	19UPH207	Green Physics	3	0	0	<mark>3</mark>						
4.	19UEE226	Basic Electrical and Electronics Engineering	3	0	0	3						
<mark>5.</mark>	19UAG201	(Introduction to Agricultural Engineering)	3	0	0	3						
<mark>6.</mark>	19UCY204	(Environmental Science)	3	0	0	3						
PRACTIC	CAL		•			•						
<mark>7.</mark>	19UGS210	Energy and Environmental Science Laboratory	0	0	<mark>2</mark>	<mark>1.5</mark>						
8.	19UEE221	Basic Electrical and Electronics Engineering Laboratory	0	0	3	1.5						
	TOTAL 16 1 6 20.5											
		TOTAL NO. OF CREDITS -20.5										

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Ρ	С	
THEOR	Y						
1	(19UMA326)	Transform Techniques and Partial	<mark>8</mark>	1	0	4	
2.	19UAG302	Unit Operations in Agricultural Processing	3	0	0	3	
<mark>3.</mark>	19UAG303	Fundamentals of Engineering Mechanics	3	0	0	3	
4.	19UAG304	Fundamentals of Theory of Machines	3	0	0	3	
5.	(19UAG305)	Fluid Mechanics and Open Channel Hydraulics	3	0	0	3	
6.	19UAG306	Principles and Practices of crop Production	<mark>3</mark>	0	0	3	
7.	19UGM332	Biology for Engineering Applications	1	0	0	P/F	
PRACT	CAL						
8.	19UAG307	Seminar	0	0	2	1	
9.	19UAG308	Agricultural Meteorology and Crop Husbandry Laboratory	0	0	<mark>3</mark>	<mark>1.5</mark>	
10	19UAG309	Fluid Mechanics Laboratory	0	0	3	1.5	
	TOTAL 18 1 8 2						
		TOTAL NO. OF CREDITS - 23					

SEMESTER III

SEMESTER IV

SL.NO	COURSE CODE	COURSE TITLE	L	т	Ρ	С						
THEOR	THEORY											
1.	19UMA425	Probability, Statistics and Numerical Methods	3	1	0	4						
2.	19UAG402	Tractor and Other Power Units	3	0	0	<mark>3</mark>						
<mark>3.</mark>	19UAG403	Soil and Water Conservation Engineering	3	0	0	2						
4.	19UAG404	Refrigeration and Air Conditioning for Agriculture Engineering	3	0	0	3						
<mark>5.</mark>	19UAG405	Surveying and Leveling	3	0	0	3						
6.	19UIT427	Object Oriented Programming in Python	3	0	0	3						
7.	19UGS431	Reasoning & Quantitative Aptitude	2	0	0	1						
8.	19UGM431	Gender Equality	1	0	0	P/F						
PRACTI	CAL											
9.	19UAG407	Surveying and Levelling Laboratory	0	0	3	1.5						
<mark>10.</mark>	19UAG408	Tractor and Farm Engine Laboratory	0	0	3	<mark>1.5</mark>						
<mark>11.</mark>	19UIT428	Object oriented Programming Laboratory	0	0	3	<mark>1.5</mark>						
	TOTAL 17 1 9 23											
	TOTAL NO. OF CREDITS – 23.5											

SEMESTER V

SL.NO	COURSE CODE	COURSE TITLE	L	т	Р	С					
THEORY	THEORY										
1.	19UAG501	Irrigation and Drainage Engineering	3	0	0	3					
2.	19UAG502	Agricultural Farm Machinery	3	0	0	3					
3.	19UAG503	Micro Irrigation system	3	0	0	3					
4.		Professional Elective – I	3	0	0	3					
5.		Professional Elective – II	3	0	0	3					
6.		Open Elective – I	3	0	0	3					
PRACTIC	CAL					•					
7.	19UAG507	Creative Thinking and Innovation	0	0	2	1					
8.	19UAG508	Irrigation and Drainage Laboratory	0	0	3	1.5					
9.	19UAG509	Agricultural Farm Machinery Laboratory	0	0	3	1.5					
10.	19UGS532	Soft skills Laboratory	0	0	3	1.5					
		TOTAL	18	0	11	23.5					
	TOTAL NO. OF CREDITS – 23.5										

SEMESTER VI

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Р	С		
THEORY	/				•	•		
1.	19UAG601	Hydrology and Water Resource Engineering	3	0	0	3		
2.	19UAG602	Design of Agricultural Machinery	3	0	0	3		
3.	19UAG603	Ground water and well engineering	3	0	0	3		
4.		Professional Elective – III	3	0	0	3		
5.		Professional Elective – IV	3	0	0	3		
6.		Open Elective – II	3	0	0	3		
7.	19UGM636	Indian Constitution and Essence of Indian Traditional Knowledge in Agriculture	1	0	0	P/F		
PRACTI	CAL					•		
8.	19UAG607	Product Development Project	0	0	8	4		
9.	19UAG608	CAD for Agricultural Engineering	0	0	4	2		
10.	19UGS633	Interpersonal Skills Development Laboratory	0	0	3	1.5		
	TOTAL 18 0 15 25.5							
	TOTAL NO. OF CREDITS – 25.5							

SEMESTER VII

SL.NO	COURSE CODE	COURSE TITLE	L	т	Ρ	С				
THEORY										
1.	19UME701	Project Management and Finance	3	0	0	3				
2.	19UAG702	Crop Process Engineering	3	0	0	3				
3.	19UAG703	Introduction to Green Energy	3	0	0	3				
4.		Professional Elective – V	3	0	0	3				
5.		Open Elective – III	3	0	0	3				
6.	19UGM731	Professional Ethics and Human Values	2	0	0	P/F				
PRACTI	CAL									
7.	19UAG707	Summer Internship	0	0	2	1				
8.	19UAG708	Agricultural Processing Laboratory	0	0	3	1.5				
9.	19UAG709	Green Energy Laboratory	0	0	3	1.5				
	TOTAL				8	19				
	TOTAL NO. OF CREDITS - 19									

SEMESTER VIII

SL.N	COURSE	COURSE TITLE	1	т	Р	С					
0	CODE		-	•	•	•					
THEOR	THEORY										
1.		Professional Elective – VI	3	0	0	3					
2.		Open Elective – IV	3	0	0	3					
PRACT	ICAL										
3.	19UAG801	Project Work - II	0	0	16	8					
	TOTAL 6 0 16					14					
	TOTAL NO. OF CREDITS - 14										

PROFESSIONAL ELECTIVES

SL.NO	COURSE CODE	COURSE TITLE	L	т	Р	С
1.	19UAG901	Manufacturing Technology	3	0	0	3
2.	19UAG902	Soil and Water Conservation Structures	3	0	0	3
3.	19UAG903	Watershed Planning and Management	3	0	0	3
4.	19UAG904	Landscape Irrigation Design and Management	3	0	0	3
5.	19UAG905	Energy Auditing and Management	3	0	0	3
6.	19UAG906	Fundamentals of Heat and Mass Transfer	3	0	0	3
7.	19UAG907	Design and Construction of Greenhouse	3	0	0	3
8.	19UAG908	IoT Application in Agriculture Engineering	3	0	0	3
9.	19UAG909	Design of Food Processing Equipment	3	0	0	3
10.	19UAG910	Agricultural Extension	3	0	0	3
11.	19UAG911	Drying and Storage Engineering	3	0	0	3

ONE CREDIT COURCES

SL.No	COURSE CODE	COURSE TITLE	L	Т	Ρ	С
1.	19UAG861	Mushroom Cultivation Technology	1	0	0	1
2.	19UAG862	Vermi Compost Technology	1	0	0	1
3.	19UAG863	Entrepreneurship in Agriculture	1	0	0	1
4.	19UAG864	AI in Agriculture	1	0	0	1
5.	19UAG865	Seed Production Technology	1	0	0	1
6.	19UAG866	Solar PV system	1	0	0	1

OPEN ELECTIVES

SL.NO	COURSE CODE	COURSE TITLE	L	т	Ρ	С
1.	19UAG971	Organic Farming Technology	3	0	0	З
2.	19UAG972	Basics of Landscape Gardening	3	0	0	3
3.	19UAG973	Agricultural Farm structures	3	0	0	3
4.	19UAG974	Agribusiness Management	3	0	0	3